

Biogas production is now
**MORE PROFITABLE
THAN EVER**



BIOGTS OY

- ▶ Established in 2011
- ▶ Designing, constructing, operating and researching biogas and biodiesel plants
- ▶ Employs more than 100 professionals, both directly and via subcontractors
- ▶ Turnover in 2016: 11.3 million euros



OUR CLIENTS



**WASTE
MANAGEMENT
COMPANIES**



**ENERGY
COMPANIES**



AGRICULTURE



**FOOD
INDUSTRY**



**PULP AND
PAPER
INDUSTRY**

 BioGTS

BIOGTS® PLANTS



BIOGAS



BIODIESEL



BIOREFINERY

- ▶ Compact reactor structure, extremely competitive investment cost, short investment payback period and lower operating costs
- ▶ Our high-quality plant deliveries are based on a prefabricated and cost-efficient modular structure, manufactured in Finland
- ▶ Small land area requirement, easy to scale
- ▶ A quick plug-in installation
- ▶ Continuously operating, automated and remotely monitored

BIOGTS® BIOGAS PLANTS

- ▶ The biogas plant turns waste into bioenergy and biofuel
- ▶ Based on patented dry anaerobic digestion process
- ▶ Turn-key installation
- ▶ As much as 30 % lower investment costs and up to 70 % lower operating costs than with traditional biogas processes



BIOGTS® BIOGAS PLANTS

- ▶ A horizontal container reactor
- ▶ Cost-efficient, modular structure
- ▶ Light foundations, all structures above the ground
- ▶ Easy to scale
- ▶ Small land-area requirement



BIOGTS® BIOGAS PLANTS

- ▶ Continuously operating, automated and remotely monitored
- ▶ All maintenance work can be done from outside the reactor
- ▶ Quick start-up
- ▶ High collateral value
- ▶ Several financing options, including leasing



BIOGTS® BIOGAS PLANT

– FEEDSTOCK

- ▶ Food waste from households, restaurants and grocery stores
- ▶ Organic fraction of Municipal Solid Waste
- ▶ Biodegradable waste and residues from the food industry
- ▶ Wastewater sludge
- ▶ Dry manure, separated manure
- ▶ Agricultural biomass: silage; straw; grass from protection zones and set-aside fields; and other plant waste from agriculture, gardens and parks



THE BIOGAS PROCESS – DRY ANAEROBIC DIGESTION

DRY ANAEROBIC DIGESTION

- ▶ High dry material concentration of the feedstock (approx. 15–40 %)
- ▶ No need to add liquids, even when using dry feedstock materials

PLUG-FLOW OPERATION

- ▶ Feedstock is inserted into the reactor from one end and the treated material is removed from the other.



BIOGTS® PLANTS

BIOGAS | BIODIESEL | BIOREFINERY



BioGTS® Biogas plant, Haminan Energia Ltd., Virolahti, Finland



BioGTS® Biogas plant, Mustankorkea Ltd., Jyväskylä, Finland



BioGTS® Biogas plant, Biohauki Ltd., Mikkeli, Finland



BioGTS® Biogas plant, Suupohja Vocational School, Kauhajoki, Finland



BioGTS® Biogas plant, Punkalaitumen Bioenergiaoyhtiö Ltd. Punkalaidun, Finland



BioGTS® Biogas plant, Central China



Bioboksi® Biogas plant, Qvidja Kraft AB, Parainen, Finland



BioGTS® Biogas plant, BioSairila, Mikkeli, Finland



BioGTS® Biorefinery, VSS Biopower Ltd., Säkylä, Finland



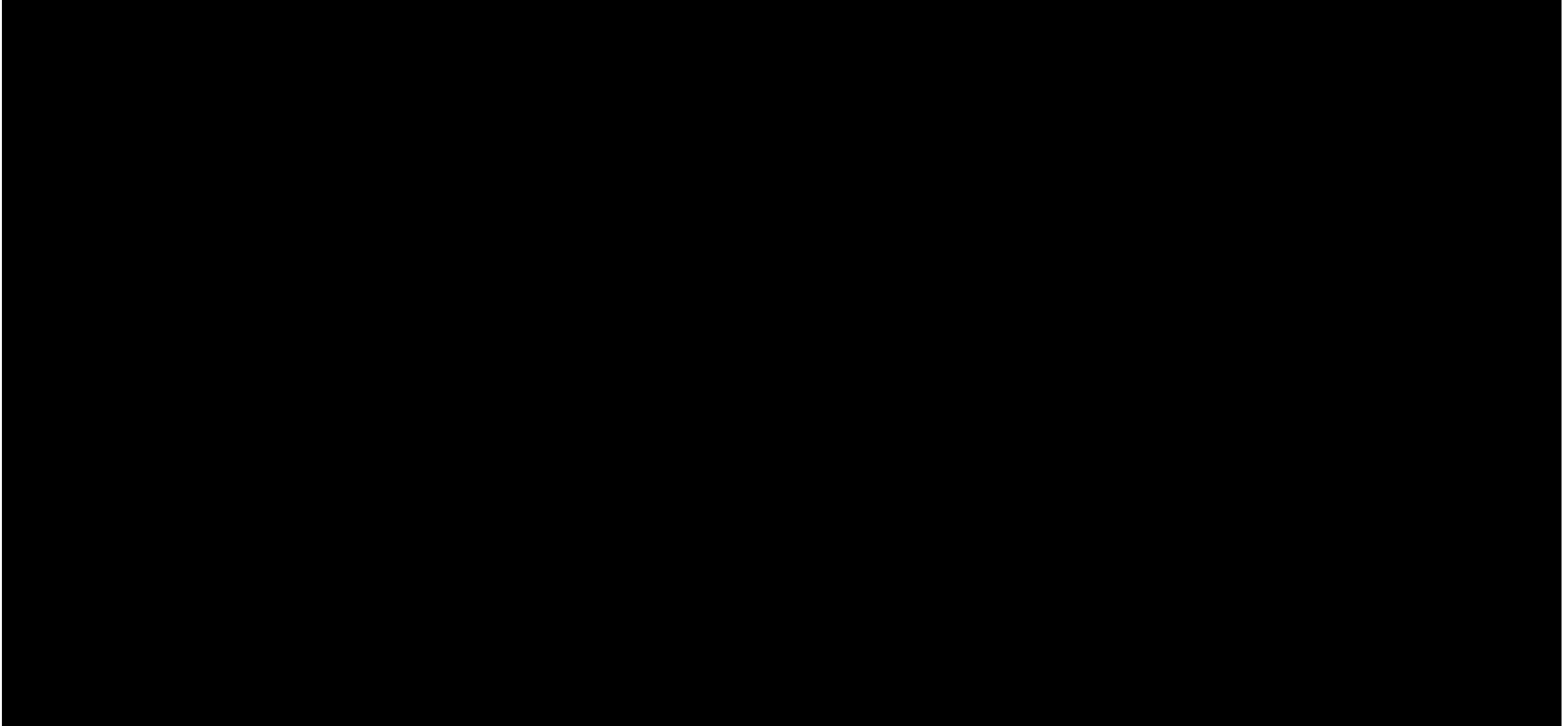
BioGTS® Biodiesel plant, BioMpower Ltd., Laukaa, Finland

MUSTANKORKEA OY, THE BIGGEST BIOGAS PLANT IN THE JYVÄSKYLÄ REGION

- ▶ Client: municipal waste management company
- ▶ Waste treatment capacity approx. 19,000 tons/year of municipal waste, sewage sludge and residues from food industry
- ▶ The biogas is utilized as vehicle fuel
- ▶ Equivalent to the annual fuel consumption of approx. 1,400-1,600 passenger cars
- ▶ Construction was completed in spring 2017, in start-up phase



BIOGAS PLANT - MUSTANKORKEA OY





THANK YOU
FOR YOUR TIME!

BioGTS Ltd.

BioGTS

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